

What is claimed is:

1. An electrophotographic, positively charged toner comprising
a core toner, spherified through heat treatment, including a binder resin, a
wax, a colorant and a charge control agent as principal component materials, the

5 charge control agent containing

a resin having a quaternary ammonium salt group as a functional
group, and

a nigrosine dye; and

at least fine silica particles as an external additive.

10 2. The toner according to claim 1, wherein the colorant includes per 100
parts by weight of the binder resin, 3 to 6 parts by weight of carbon black exhibiting a
pH of at least 8.0.

3. The toner according to claim 1, wherein the charge control agent contains
2 to 10 parts by weight of the resin having a quaternary ammonium salt

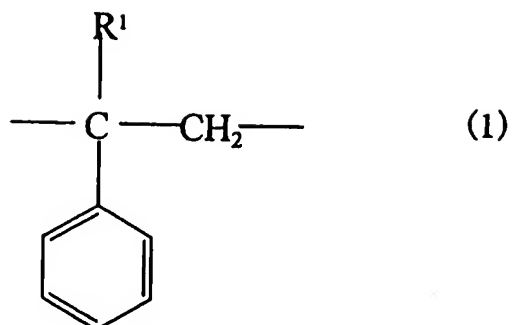
15 group as a functional group, and

0.5 to 5 parts by weight of the nigrosine dye per 100 parts by weight of the
binder resin.

4. The toner according to claim 3, wherein the resin having a quaternary
ammonium salt group as a functional group has as a principal component a

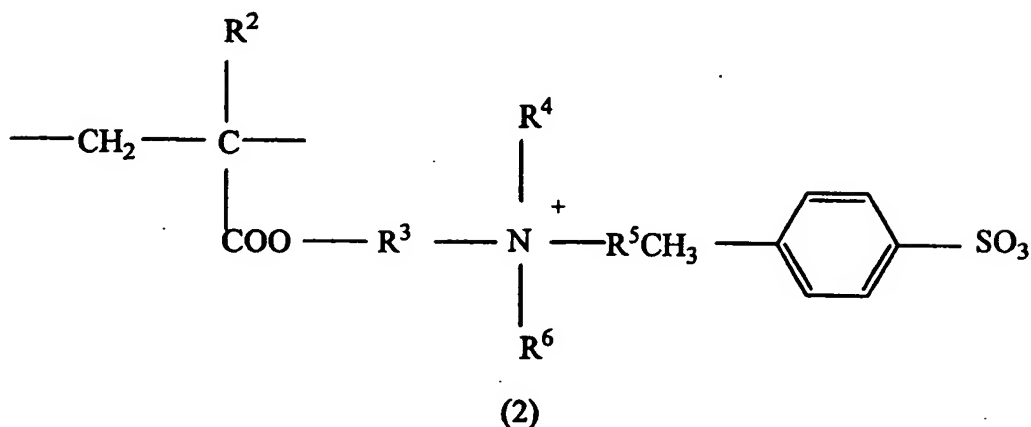
20 styrene-acrylic copolymer resin, the styrene-acrylic copolymer resin containing
a repeat unit represented by the following formula (1)

[Formula 1],



and a repeat unit represented by the following formula (2)

[Formula 2],



where, in the formulae (1) and (2), R^1 and R^2 represent a hydrogen atom or a methyl group, R^3 represents an alkylene group, and R^4 , R^5 and R^6 each represents an alkyl group;

the styrene-acrylic copolymer resin including 65 to 97 wt% of the repeat unit represented by the formula (1) and 35 to 3 wt% of the repeat unit represented by the formula (2), and having a weight average molecular weight in a range of 2,000 to

10,000.

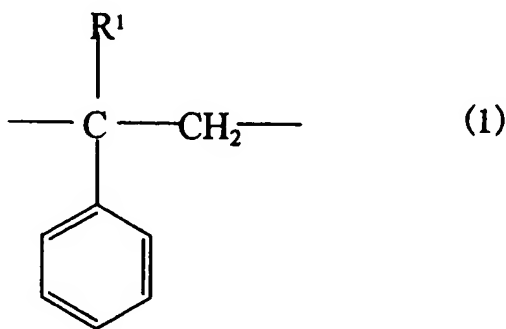
5. The toner according to claim 3, wherein the binder resin has a styrene-acrylic copolymer resin as a principal component.

6. The toner according to claim 4, wherein the colorant includes per 100 parts by weight of the binder resin, 3 to 6 parts by weight of carbon black exhibiting a pH of at least 8.0.

7. The toner according to claim 3, wherein the colorant includes per 100 parts by weight of the binder resin, 3 to 6 parts by weight of carbon black exhibiting a pH of at least 8.0.

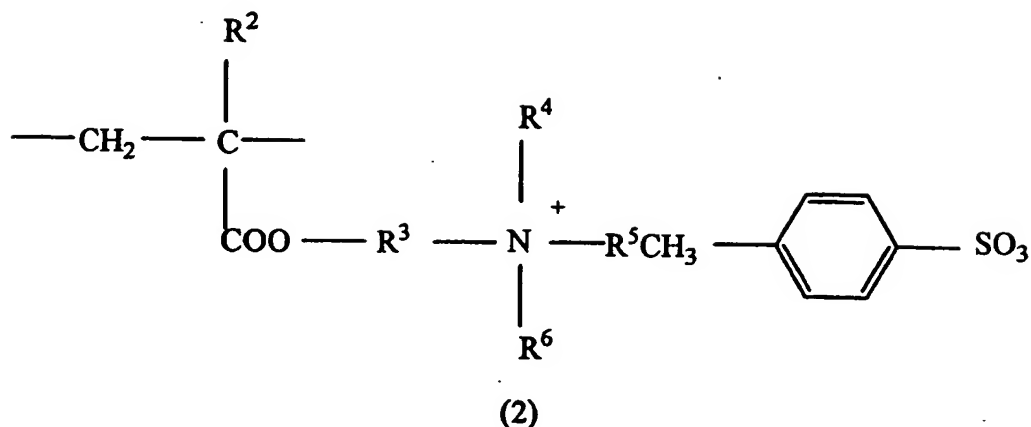
8. The toner according to claim 1, wherein the resin having a quaternary ammonium salt group as a functional group has as a principal component a styrene-acrylic copolymer resin, the styrene-acrylic copolymer resin containing a repeat unit represented by the following formula (1):

[Formula 1],



and a repeat unit represented by the following formula (2):

[Formula 2]



where, in the formulae (1) and (2), R¹ and R² represent a hydrogen atom or a methyl group, R³ represents an alkylene group, and R⁴, R⁵ and R⁶ each represents an alkyl group;

the styrene-acrylic copolymer resin including 65 to 97 wt% of the repeat unit represented by the formula (1) and 35 to 3 wt% of the repeat unit represented by the formula (2), and having a weight average molecular weight in a range of 2,000 to 10,000.

9. The toner according to claim 8, wherein the binder resin has a styrene-acrylic copolymer resin as a principal component.

10. The toner according to claim 9, wherein the colorant includes per 100 parts by weight of the binder resin, 3 to 6 parts by weight of carbon black exhibiting a pH of at least 8.0.

11. The toner according to claim 8, wherein the colorant includes per 100 parts by weight of the binder resin, 3 to 6 parts by weight of carbon black exhibiting a pH of at least 8.0.

12. The toner according to claim 1, wherein the binder resin has a
5 styrene-acrylic copolymer resin as a principal component.

13. The toner according to claim 12, wherein the colorant includes per 100 parts by weight of the binder resin, 3 to 6 parts by weight of carbon black exhibiting a pH of at least 8.0.

14. A method of manufacturing an electrophotographic positively charging
10 toner, the method comprising the steps of:

mixing/agitating a binder resin, a wax, a colorant and a charge control agent as principal component materials,

hot melt-kneading and pulverizing the mixed/agitated binder resin, a wax, a colorant and a charge control agent, and classifying the kneaded material obtained
15 to produce a core toner, and

spherifying the core toner through hot air blast treatment, and then mixing in at least silica fine particles as an external additive.

15. The method of claim 14, wherein the charge control agent contains
2 to 10 parts by weight of the resin having a quaternary ammonium salt
20 group as a functional group, and

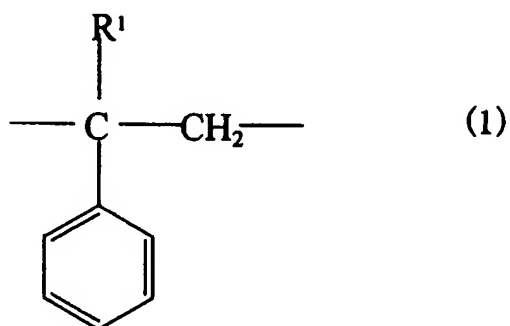
0.5 to 5 parts by weight of the nigrosine dye per 100 parts by weight of the binder resin.

16. The method of claim 14, wherein the resin has a quaternary ammonium

salt group as a functional group has as a principal component a styrene-acrylic copolymer resin, the styrene-acrylic copolymer resin containing

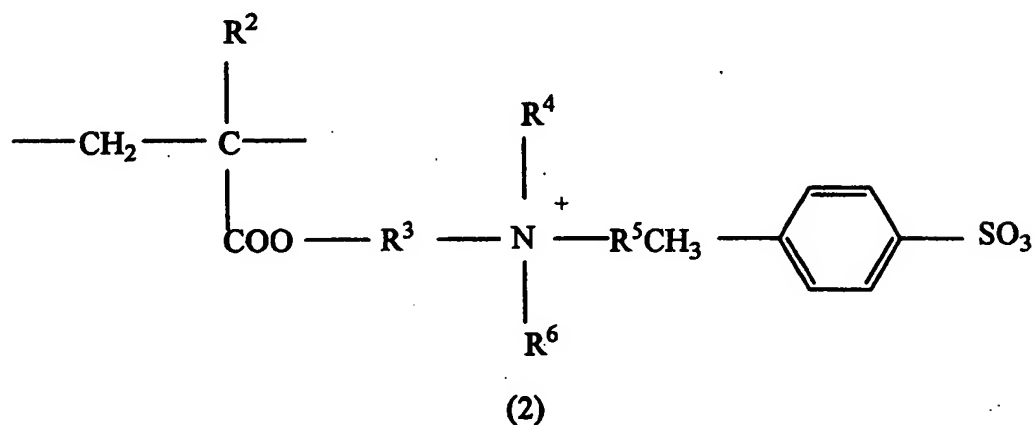
a repeat unit represented by the following formula (1):

[Formula 1],



and a repeat unit represented by the following formula (2):

[Formula 2]



where, in the formulae (1) and (2), R¹ and R² represent a hydrogen atom or a methyl group, R³ represents an alkylene group, and R⁴, R⁵ and R⁶ each represents

an alkyl group;

the styrene-acrylic copolymer resin including 65 to 97 wt% of the repeat unit represented by the formula (1) and 35 to 3 wt% of the repeat unit represented by the formula (2), and having a weight average molecular weight in a range of 2,000 to
5 10,000.

17. The method of claim 14, wherein the binder resin has a styrene-acrylic copolymer resin as a principal component.

18. The method of claim 15, wherein the binder resin has a styrene-acrylic copolymer resin as a principal component.

10 19. The method of claim 14, wherein the colorant includes per 100 parts by weight of the binder resin, 3 to 6 parts by weight of carbon black exhibiting a pH of at least 8.0.

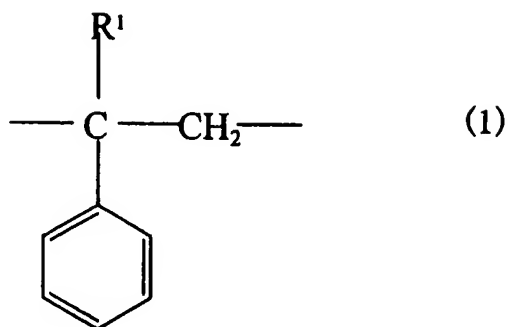
20. The method of claim 15, wherein the colorant includes per 100 parts by weight of the binder resin, 3 to 6 parts by weight of carbon black exhibiting a pH of at
15 least 8.0.

21. The method of claim 16, wherein the colorant includes per 100 parts by weight of the binder resin, 3 to 6 parts by weight of carbon black exhibiting a pH of at least 8.0.

22. The method of claim 15, wherein the resin has a quaternary ammonium
20 salt group as a functional group has as a principal component a styrene-acrylic copolymer resin, the styrene-acrylic copolymer resin containing

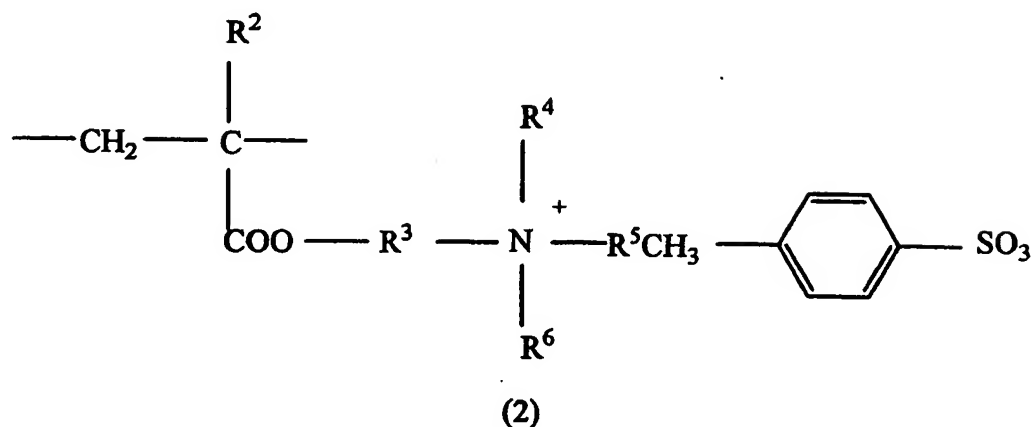
a repeat unit represented by the following formula (1)

[Formula 1],



and a repeat unit represented by the following formula (2)

[Formula 2],



wherein, in the formulae (1) and (2), R^1 and R^2 represent a hydrogen atom or a methyl group, R^3 represents an alkylene group, and R^4 , R^5 and R^6 each represents an alkyl group;

the styrene-acrylic copolymer resin including 65 to 97 wt% of the repeat unit

represented by the formula (1) and 35 to 3 wt% of the repeat unit represented by the formula (2), and having a weight average molecular weight in a range of 2,000 to 10,000;

the colorant including per 100 parts by weight of the binder resin, 3 to 6 parts
5 by weight of carbon black exhibiting a pH of at least 8.0.